

(No Model.)

C. P. CHAPPELL.

ELECTRIC SWITCH AND CASE FOR THE SAME.

No. 465,426.

Patented Dec. 15, 1891.

Fig. 1.

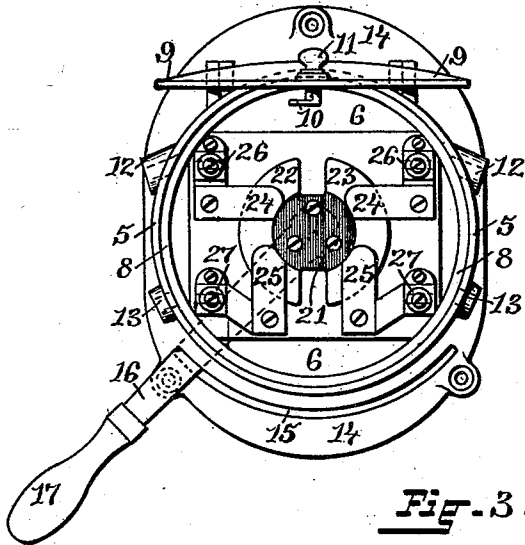


Fig. 2.

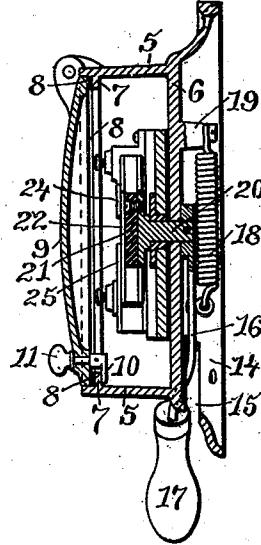
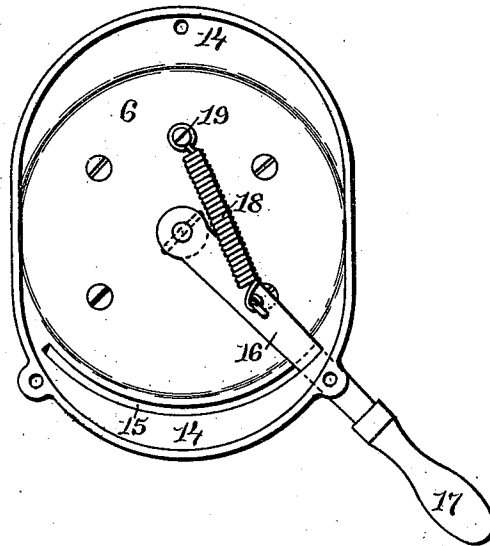


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CURTIS P. CHAPPELL, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE HOUSEHOLD SEWING MACHINE COMPANY, INCORPORATED, OF SAME PLACE.

ELECTRIC SWITCH AND CASE FOR THE SAME.

SPECIFICATION forming part of Letters Patent No. 465,426, dated December 15, 1891.

Application filed November 4, 1891. Serial No. 410,843. (No model.)

To all whom it may concern:

Be it known that I, CURTIS P. CHAPPELL, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Electric Switches and Cases for the Same; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in devices for protecting the contact-plates of electric switches from exposure to the weather.

The object of this invention is to produce a case or box in which the circuit breaking and making mechanism is protected from injury by dust or corrosion occasioned by the action of the atmosphere, while the lever by which the switch is operated is exposed to view, and may be moved without opening the switch-case.

The invention consists in the new and peculiar construction of the case and the novel combination therewith of the switch and mechanism for operating the same, as will be more fully described hereinafter, and pointed out in the claims.

Figure 1 represents a front elevation of the case, the lid of the same being raised to show the switch mechanism contained therein. Fig. 2 represents a vertical sectional view of the case and switch, showing the manner in which the switch is operated by the exposed lever. Fig. 3 represents a view of the back of the case, showing the lever secured in place and the coiled spring by which this lever is actuated after being moved past the center.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 5 indicates a case or box, which may be of any desired shape or material, but is preferably made of cast-iron. 6 is the bottom or back of the same cast in one piece therewith. Near the upper inside edge of this casing 5 and extending around the inner circumference of the same is a lip 7, which supports a packing-ring 8. The lid or cover 9 is hinged to the upper portion of the case 5 and closely fits into the same, resting against

the packing-ring 8, and being secured against this ring and thus forming a tight joint by the cam-latch 10, the shaft of which extends through the lid 9, and is fastened in the knob 11 by which the latch is turned.

Secured in or formed in part with the sides of the casing 5 are the inlets 12 and 13. These inlets enter the casing in an upward direction in order to prevent the entrance of water. They may be formed of metal or of some insulating substance.

The hollow base 14, formed in part with the casing 5, flares outward and is provided with screw-holes by which the case is secured to a suitable support. At the lower portion this base is provided with the slot 15, through which the lever 16 extends and is free to move laterally therein when operated by the handle 17 or by the tension of the coiled spring 18, secured at one end to an eye on said shaft and at the other end to the stud 19, formed in part with the rear portion of the bottom 6.

The lever 16 is secured at its upper end to a shaft 20, journaled in a bearing formed through the center of the bottom 6, and to the end of this shaft, inside the casing 5, is secured the insulation-plate 21, carrying the segmental contact-plates 22 and 23, which are moved into and out of contact with the spring-plates 24 and 25, supported on an insulating-base and connected with the binding-posts 26 and 27, which are in turn connected with the wires of the main and lamp circuits.

If desired, a packing-ring may be placed around that end of the shaft 20 to which the lever 16 is attached in order to prevent the entrance of dust through the bearing.

By the construction thus shown and described the contact-plates are protected from damage by dust as well as from the corrosive action of the weather. At the same time the handle 17 is exposed to view and is in a position to be readily moved to throw the switch.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a switch-case, the combination, with the case 5, having the bottom or back 6 and inlets 12 and 13, the lip 7, provided with the packing-ring 8, and the hinged lid 9, secured

by the latch 10, of the hollow base 14, having the slot 15, and a switching device contained within said case 5 and operated by a shaft extending into the hollow base and secured to mechanism contained therein adapted to rotate said shaft, as described.

2. The combination, with the case 5, supported on the hollow base 14, provided with the slot 15 and having the inlets 12 and 13, the lip 7, provided with the packing-ring 8, and the lid 9, hinged to said case and secured by a latch, of the insulated spring-contacts 24 and 25, connected with the binding-posts 26

and 27, the segmental contacts 22 and 23, carried on the insulating-plate 21, the shaft 20, secured to said insulating-plate and journaled in a bearing formed through the bottom 6, the lever 16, extending through the slot 15 and secured to said shaft 20 and adapted to operate the same, and the coiled spring 18, secured to said lever and to the stud 19, as described.

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